

What is Claimed is:

1. A joint prosthesis comprising:

at least one segmented shell,

means for attaching said shell to a prepared area on the hip bone of a patient;

5 a cup, said cup having an exterior surface and an interior surface, said exterior surface of said cup being sized and configured to be received in said shell, forming a new acetabular socket; and

a shaft having a first end and a second end, said shaft being sized and configured to be receivable in a prepared femur of the patient, and said first end of said shaft having

10 a ball formed thereon that is received by said cup for movement therein.

2 A joint prosthesis as in claim 1 wherein said segmented shell comprises:

a base; and

a plurality of segments, each segment, of said plurality of segments,

having a first end, a second end and a pair of opposing sides extending therebetween,

5 each first end of each said segment, of said plurality of segments, pivotally engaging said base such that each side of each said segment, of said plurality of segments, is adjacent one of said sides of another one of said plurality of segments, each segment, of said plurality of segments, being longitudinally and transversely arcuate, such that when each segment, of said plurality of segments, is aligned with adjacent segments, of said plurality
10 of segments, said plurality of segments form a cup-shaped segmented shell.

3. A joint prosthesis as in claim 2, wherein said base has a ridge formed thereon and each segment, of said plurality of segments, has a groove formed therein proximal said first end thereof, said groove receiving said ridge therein.
4. A joint prosthesis as in claim 3, wherein said base further comprises a plurality of secondary guide wires extending outwardly from said ridge, each segment, of said plurality of segments, having a hole therethrough that extends through said groove so that the hole through each segment, of said plurality of segments, may receive a corresponding
- 5 one of said plurality of secondary guide wires, whereby each segment, of said plurality of segments, is guided to its position along said ridge of said base.
5. A joint prosthesis as in claim 1, wherein said segmented shell is comprised of metal.
6. A joint prosthesis as in claim 1, further comprising:
a second shell designed and configured to be received in said segmented shell and sized and configured to receive said cup therein.
7. A joint prosthesis as in claim 6, wherein said second shell is formed from a synthetic resin.

8. A joint prosthesis as in claim 6, wherein said second shell further comprises:

a plurality of parts, each part, of said plurality of parts, having a longitudinal axis, a first longitudinal end, a second longitudinal end, a first face and a second face, a pair of sides, opposing one another across said longitudinal axis, said sides extending between said first and second faces, said first face of each part being longitudinally and transversely arcuate, and said first ends of said plurality of parts being linked to one another such that when each side of each said part, of said plurality of parts, is adjacent one of said sides of at least another one of said plurality of parts, said plurality of parts form said second shell so that said second shell is cup-shaped.

9. A joint prosthesis as in claim 8, wherein said plurality of parts comprise,

a first group of parts and a second group of parts, at least a portion of said opposing sides of each part, of said first group of parts, extend from said second face and taper toward one another, and at least a portion of said opposing sides of each part, of said second group of parts, extend from said first face and taper toward one another.

10. A joint prosthesis as in claim 1, said shaft further comprising,

said ball, a neck, a body, said body having a bottom surface, said neck being formed on said shaft such that said neck attaches said ball to said body, and,

at least one tube having first and second open ends, said tube extending from said bottom surface of said body so that said second of said tube opens through said neck..

11. A joint prosthesis as in claim 10, said shaft further comprising,
said body having at least one longitudinally extending side wall,
a second tube having a first open end extending through said bottom surface of
said shaft and a second closed second end, and
5 at least one secondary tube passing through said side wall of said body and
through said second tube such that said secondary tube is in fluid flow communication
with said second tube.
12. A joint prosthesis as in claim 1, said shaft further comprising at least one
longitudinally extending side wall and a groove formed in said side wall proximal said
second end of said shaft, a U-shaped shield having a bottom and a pair of legs extending
outwardly therefrom, said bottom being received in said groove such that said pair of legs
5 extend outwardly from said shaft.